

AMENDMENTS TO THE CLAIMS:

Please amend claims 1 and 2, and cancel claims 16-28, and 32 as indicated below. This listing of claims will replace all prior versions and listings of claims in the application. Deletions appear in ~~strike through font~~, and additions are underlined.

1. (Currently Amended) A permselective asymmetric hollow fibre membrane for the separation of toxic mediators from blood, comprised of at least one hydrophobic polymer and at least one hydrophilic polymer, wherein said membrane allows passage of molecules having a molecular weight of up to 45 000 Daltons, with a sieving coefficient of 0.1-1.0 in presence of whole blood, and has a molecular weight exclusion limit ~~in water~~ of about 200,000 Daltons, with a sieving coefficient of 0.1 in water.

2. (Currently Amended) A membrane according to claim 1, wherein said at least one hydrophilic polymer and said at least one hydrophobic polymer are present in the membrane as domains on the surface,
wherein the size of the hydrophilic domains are in the range of 20-50 nm.

3. (Previously Presented) A membrane according to claim 1 wherein said at least one hydrophobic polymer is present in an amount of 50-80 weight%, based on the weight of the membrane.

4. (Previously Presented) A membrane according to claim 1 wherein said at least one hydrophilic polymer is present in an amount of 20-50 weight%, based on the weight of the membrane.

5. (Previously Presented) A membrane according to claim 1, wherein said at least one hydrophobic polymer is chosen from the group consisting of polyarylethersulfone (PAES), polypropylene (PP), polysulfone (PSU), polymethylmethacrylate (PMMA), polycarbonate (PC), polyacrylonitrile (PAN), polyamide (PA), and polytetrafluorethylene (PTFE).

6. (Previously Presented) A membrane according to claim 1, wherein said at least one hydrophilic polymer is chosen from the group consisting of polyvinylpyrrolidone (PVP), polyethyleneglycol (PEG), polyvinylalcohol (PVA), and copolymer of polypropyleneoxide and polyethyleneoxide (PPO-PEO).

7. (Previously Presented) A membrane according to claim 1, wherein said membrane has at least a 3-layer asymmetric structure.

8. (Previously Presented) A membrane according to claim 1, wherein a separation layer is present in the inner most layer of the hollow fibre.

9. (Previously Presented) A membrane according to claim 8, wherein the separation layer has a thickness of $< 0.5 \mu\text{m}$.

10. (Previously Presented) A membrane according to claim 8, wherein the separation layer contains pore channels.

11. (Previously Presented) A membrane according to claim 8, wherein the pore size in the separation layer is 15-60 nm.

12. (Previously Presented) A membrane 1 according to claim 1, wherein the sieving coefficient for IL-6 in presence of whole blood is 0.9-1.0.

13. (Previously Presented) A membrane according to claim 1, wherein the sieving coefficient for albumin in presence of whole blood is below 0.05.

14. (Previously Presented) A membrane according to claim 1, wherein the openings of the pores on the outer surface are in the range of 0.5-3 μm and the number of said pores is in the range of 10,000 to 150,000 pores/ mm^2 .

15. (Previously Presented) A membrane according to claim 14, wherein said membrane has a four-layer asymmetric structure, and wherein the fourth outer layer has the form of a sponge layer wherein the openings of the pores on the outer surface of said fourth outer layer are in the range of 0.5-3 μm and the number of said pores is in the range of 10,000 to 150,000 pores/ mm^2 .

16-28. (Cancelled).

29. (Previously Presented) A membrane according to claim 11, wherein the pore size in the separation layer is 20-40 nm.

30. (Previously Presented) A membrane according to claim 14, wherein the number of pores on the outer surface of the membrane is in the range of 20,000 to 100,000 pores/ mm^2 .

31. (Previously Presented) A membrane according to claim 15, wherein the number of pores on the outer surface of said fourth outer layer is in the range of 20,000 to 100,000 pores/ mm^2 .

32. (Cancelled).